

**Notice of Allowability**

Application No.

09/548,469

Examiner

Aimee J. Li

Applicant(s)

SINHAROY ET AL.

Art Unit

2183

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Appeal Brief filed 08 April 2005.
2. ☒ The allowed claim(s) is/are 1-14, 39 and 40.
3. ☒ The drawings filed on 13 April 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Kelly K. Kordzik (Reg. No. 36, 571) on 23 June 2005 and with Robert A. Voigt Jr. (Reg. No. 47,159) on 27 June 2005.
3. The application has been amended as follows:
  - a. Claim 1 recites "determining if a specified condition register field is used to store a branch condition of the conditional branch instruction". Please amend it to recite --determining if a specified condition register field of a condition register is used to store a branch condition of the conditional branch instruction--.
  - b. Claim 39 recites "A data processing system for predicting whether a conditional branch instruction will be taken or not take, the data processing system comprising the program steps of:". Please amend it to recite -- A data processing system for predicting whether a conditional branch instruction will be taken or not take, the data processing system comprising including a computer programmable product embodied in a computer readable medium, the program product comprises the program steps of:--

### REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

- c. Claims 1 and 8 recite the limitations “providing a software branch prediction of the conditional branch instruction as a function of the determination if the specified condition register field is used to store the branch condition of the conditional branch instruction.” Applicants’ arguments in the Appeal Brief filed 08 April 2005 states that the prediction is “based on whether a specified field, e.g., field 1, is used to store a condition (Appeal Brief page 11).” This is further supported in Applicants’ specification, such as on page 19, lines 16-18. When referring to “specified condition register field” in the claims, the field is a specific location within the condition register used to store the conditional branch condition. Also, the branch prediction is provided after a function is performed on the result of the determination if a branch condition has been stored in a specific location within the condition register. The prior art searched and of record bases its branch predictions on the type of branch condition not the specific location where the condition is stored.
- d. Claim 39 recites the limitation “predicting whether the conditional branch instruction will be taken or not taken as a function of the position of the specified address.” Applicants’ arguments in the Appeal Brief filed 08 April 2005 states that “...matching the instruction fetched with a set of stored instruction addresses...is not the same as predicting whether a conditional branch instruction will be take or not taken as a function of the position of the specified address.” This is further supported in Applicants’ specification in the paragraph beginning at line 6 on page 20. When referring to “function of the position of the specified

address”, the function is using where the specified address is located in a sequence of instructions, i.e. whether the specified address is the first instruction to be executed or the twentieth instruction to be executed in the sequence of instructions, to determine the branch prediction. The prior art searched and of record bases its branch predictions on whether the memory address of the branch instruction matches an memory address in the branch target buffer not on a function of the position in a sequence of instructions of the memory address.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aimee J. Li whose telephone number is (571) 272-4169. The examiner can normally be reached on M-T 7:30am-5:00pm.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Eddie Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2183

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AJL  
Aimee J. Li  
21 June 2005



EDDIE CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100